

EXHIBIT 11

IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF NEW YORK

LEIGHTON TECHNOLOGIES, :
Plaintiffs, :
vs. : No. 04-CV-02496
OBERTHUR CARD SYSTEMS, S.A., :
OBERTHUR CARD SYSTEMS OF :
AMERICA CORPORATION, :
Defendants. :

--oOo--

VIDEOTAPE DEPOSITION OF

KEN THOMPSON

VOLUME I

May 4, 2006

REPORTED BY: KENNETH T. BRILL, RPR, CSR 12797

ELLEN GRAUER COURT REPORTING CO. LLC
126 East 56th Street, Fifth Floor
New York, New York 10022
212-750-6434
REF: 80728

1 THOMPSON

2 BY MR. B. JACOBS:

3 Q. You testified a little bit earlier that
4 there was a conscious decision made to not file
5 patent applications and to protect smart card
6 technology as trade --

7 A. Right.

8 Q. -- secret; right?

9 A. Right.

10 Q. So that was something that was different
11 than a conscious decision that was made in the inter
12 technology -- interconnection section?

13 MR. J. D. JACOBS: Objection.

14 THE WITNESS: We had discussed it, you
15 know, should we do some patents on this, and we felt
16 like, you know, we've heard bits and pieces of
17 information from -- from people in the industry.

18 And we don't see that many things we're
19 doing which is that novel. And the way that we're
20 doing it, we didn't think that someone skilled in
21 the art could take a product apart and determine how
22 it was done, or what the parameters were.

23 So we knew the other -- we had ISO cards
24 out there, you know, we had AVC-131s we already had
25 for sale. We knew that other people were doing

1 THOMPSON

2 cards here and there. So it just didn't -- it just
3 didn't fit in with what we'd normally think as a,
4 you know, thing -- the thing to do.

5 BY MR. B. JACOBS:

6 Q. Do you have any licenses that you're aware
7 of that you entered into regarding smart card
8 technology?

9 A. Smart card technology?

10 Q. Yes, sir.

11 A. This is in the 1997, '98, '99 timeframe?

12 Q. Yes.

13 A. The headquarters for smart card division
14 was in Chicago, and that's where most of the people
15 were -- were housed. And I was based out of San
16 Jose. And there was maybe three or four, five
17 people who were working on the smart card efforts in
18 San Jose. About four, five people out of, you know,
19 a hundred, were solely focused on that. There may
20 have been some licenses and software and other
21 things, I don't -- I don't recall.

22 Q. Okay. Let's look at a couple of other
23 things. Under the section captioned Radio Frequency
24 Identification --

25 A. Mm-hmm.

EXHIBIT 12

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IN THE UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

Leighton Technologies, LLC,)

Plaintiff-Counterclaim)

Defendant,)Case No.

-vs-)04Civ

Oberthur Card Systems, S.A.,)2496(CM)

Defendant-Counterclaim)

Plaintiff.)

- - - o0o - - -

Continued deposition of KEITH R.

LEIGHTON, a witness herein, called by the
Defendant- Counterclaim Plaintiff, as if
upon cross-examination under the statute,
and taken before Luanne Stone, a Notary
Public within and for the State of Ohio,
pursuant to the issuance of notice and
subpoena, and pursuant to the further
stipulations of counsel herein contained, on
Monday, the 10th day of October, 2005 at
9:00 o'clock A.M., at the Renaissance Hotel,
the City of Cleveland, the County of
Cuyahoga and the State of Ohio.

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120 Ohio Savings Plaza
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1 signed because I had told them ahead of time
2 what I would be doing out there, and to get
3 it clear in their mind, they made sketches
4 of what I would be doing.

5 Q: So, on this first visit, you signed a
6 contract?

7 A: It was a -- a contract agreement that
8 would be fine-tuned later. We had
9 discoverables and things that I would be
10 giving to Motorola. They called it a list
11 of deliverables that I would make up before
12 coming back out the second time.

13 Q: Was there anything else of substance
14 that you can recall from your first day out
15 at Motorola?

16 A: The only thing is, they did not put
17 me up in the same motel that they did the
18 first time. The Fairmount was nice.

19 Q: The first time you stayed in a nice
20 motel?

21 A: A beautiful motel.

22 Q: Okay. Motorola, do I understand
23 correctly that Motorola showed you their
24 facilities without asking you to sign a
25 disclosure confidentiality agreement?

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1 A: That's correct.

2 Q: And you saw a laminating press on
3 your first visit there?

4 A: Just walked past it, didn't study it.
5 It did look like a Burkle laminator, and
6 everybody in the world knows that a Burkle
7 laminator is one of the Cadillacs, so --

8 Q: Okay.

9 A: At the time I did not know that the
10 Burkle laminator wasn't designed to make
11 plastic cards. It was designed to make
12 circuit boards. It was not the right tool.

13 MR. JACOBS: Do you have that first
14 contract?

15 BY MR. JACOBS:

16 Q: Did you maintain a copy of this, for
17 want of a better word, document that
18 Motorola gave you regarding your obligations
19 to them?

20 A: The drawing? I did have that. I
21 don't recall seeing it in our records here.
22 It was handwritten with a sketch on it.
23 This document here was done after I was
24 working there, even after a couple of days
25 of working there.

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EXHIBIT 13

IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF NEW YORK

LEIGHTON TECHNOLOGIES, LLC,)

plaintiff,)

vs.)

Case No.

) 04 Civ. 02496 (CM)

OBERTHUR CARD SYSTEMS, S.A.)

and OBERTHUR CARD SYSTEMS)

OF AMERICA CORP.,)

defendants.)

(Volume III - pages 522 through 875)

Continued videotaped deposition of
KEITH LEIGHTON, a witness herein, called by the
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the further stipulations of counsel herein
contained, on Monday, the 23rd day of October,
2006 at 8:02 a.m., at the offices of Tackla &
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1 unfair to you, what they were asking you to do
2 in switching to a silver dollar sized electronic
3 element?

4 A I had to see if I could accomplish that
5 goal.

6 Q Okay. All right. Let's start with -- I
7 need your help just making sure that we all
8 completely understand the first card that
9 Motorola asked you to work on.

10 A Um-hum.

11 Q Okay? The one with the dime-sized antenna.

12 Could you draw for us the layers of
13 the -- you said first that it was -- you made
14 a -- an inlay or a pre-lam?

15 A Yes. There was an inlay that they had
16 prior to my coming there.

17 Q What's an inlay? I want to make sure that
18 we're all on the same page.

19 A An inlay is an antenna and chip affixed
20 together. They solder the chip to the wire loop
21 antenna.

22 Q And was the antenna and chip on any sort of
23 substrate?

24 A They provided a substrate that they had, I
25 believe they got that from Colastics, a

1 substrate that was just a PVC sheet where they
2 die cut a circle in the center of this PVC, they
3 inserted -- at the beginning they were using a
4 dime size inlay that they put in a -- looked
5 like silicon, it was flexible soft rubber, and
6 they inserted that in the hole that they had in
7 the plastic.

8 Q Okay. And when you say "they" inserted it,
9 did Motorola make the inlay?

10 A Yes.

11 Q So they had the chip, they had the antenna,
12 they had the PVC sheet, and they put it all
13 together?

14 A Right.

15 Q Okay. Could you start by drawing that for
16 us on a piece of paper, the Motorola inlay for
17 the dime size chip?

18 A They had a sheet with a series of holes cut
19 in it. I believe they were using a format of
20 three rows. They had, I believe, eight in each
21 row, as I recall. I'm not 100 percent certain
22 of this. They were inserting this coil of wire.
23 In the center of it was an IC chip. This was in
24 like a gel pack that they pressed down into the
25 sheets. They had a pre-printed overlay sheet

EXHIBIT 14

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Plaintiff-Counterclaim)

Defendant,)Case No.

-vs-)04Civ

Oberthur Card Systems, S.A.,)2496(CM)

Defendant-Counterclaim)

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1 Q: "At the meeting, I revealed my idea
2 which impressed them enough to hire me as a
3 consultant."

4 A: Correct.

5 Q: What idea did you tell them at the
6 meeting?

7 A: I told them to scrap their idea that
8 they had. Everything that they were doing
9 was wrong. They were cutting holes in the
10 plastic and putting in the radio that had
11 been encapsulated by a gel and placed in
12 there to have a different thermal melting
13 point which was not at the same melting
14 point as their PVC that they were trying to
15 laminate, and I told them that I would be
16 using different -- entirely different
17 temperatures and plastics than they were
18 using. I would be changing the plastics,
19 and they liked the idea and concept that
20 they had a new way to attack this plan in
21 being able to come up with a smooth card.

22 Q: Was that the entirety of your idea
23 that you told them?

24 A: Yes.

25 Q: Were you more specific as to what

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EXHIBIT 15

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- - - - -
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plaintiff,)

vs.)

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OBERTHUR CARD SYSTEMS, S.A.)

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defendants.)

- - - - -
(Volume III - pages 522 through 875)
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1 A And --

2 Q So are you saying that you -- you began to
3 work to improve the process but you never asked
4 what the process parameters they were using at
5 the time were?

6 A When I saw what they were doing, I knew
7 prior to going there that when you put a soft
8 gel insert in the PVC of a precut piece of PVC,
9 that when you laminate it you're going to have
10 deficiencies in the card. I knew that prior,
11 from prior experience.

12 Q Okay. When did you first learn they were
13 putting an inlay in a gel at Motorola?

14 A They showed it to me on the first day that
15 I walked out there.

16 Q Okay. And you knew immediately that there
17 were going to be problems if you used a gel of
18 one material and --

19 A That's correct.

20 Q -- inserted it into a layer of another?

21 A You have a foreign body of different
22 plastics and they don't respond to heat and
23 temperatures the same as an ordinary PVC sheet.

24 Q Okay. And you knew at least that Motorola
25 had a heating phase and a cooling phase for

EXHIBIT 16

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Defendant,)Case No.

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1 and in just a short period of time, an
2 agreement that there would be a \$1500 bonus
3 if I completed upon all of the deliverables
4 that were agreed to and being able to
5 complete the 10,000 finished cards --

6 Q: Okay.

7 A: -- of which they never kept their
8 agreement, and wouldn't provide me the
9 materials or the equipment to do what I
10 needed to do.

11 Q: Let's -- let's mark as the next
12 document a handwritten document bearing
13 Bates numbers L 06591 and 6592.

14 (At this time Defendant's Exhibit
15 120 was marked for identification purposes.)

16 MR. GUTKIN: We'll mark this down to
17 confidential.

18 BY MR. JACOBS:

19 Q: I'm going to hand you Exhibit 120,
20 Mr. Leighton, and ask if this is the
21 document about which you were just
22 testifying.

23 A: Yes, it is.

24 Q: Mr. Leighton, why don't we direct our
25 attention to the second page. Do you

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1 recognize the handwriting?

2 A: Yes. This was Ken Thompson writing
3 on an electronic board on the wall.

4 Q: Okay. What are the -- what's the
5 drawing to the left of the page, the top
6 drawing at the left edge of the page?

7 A: This is a drawing where I explained
8 to Ken Thompson of what I intended to do
9 when I come out. I told him prior to coming
10 out, prior to giving him a list of
11 equipment, prior to giving him deliverables.

12 Q: Did you make that drawing?

13 A: No. Ken Thompson did this drawing as
14 to my description of what I was telling him
15 of what I was going to do.

16 Q: Okay. What does the drawing signify?

17 A: It shows placing the radios or the
18 antenna on the surface of a plastic core
19 sheet.

20 Q: Uh-huh.

21 A: And placing an additional sheet on
22 top.

23 Q: Where is the additional sheet? Is
24 that depicted in the --

25 A: No, it's really not shown, but we

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EXHIBIT 17

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

LEIGHTON TECHNOLOGIES, LLC,) Case No.
)
Plaintiff and) 04 Civ. 02496
)
Counterclaim Defendant,)
)
v.)
)
OBERTHUR CARD SYSTEMS, S.A., AND)
)
OBERTHUR CARD SYSTEMS OF)
)
AMERICA CORPORATION,)
)
Defendants and)
)
Counterclaim Plaintiffs)

PAGES 151 - 308; VOLUME 2

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Page 264

1 THE REPORTER: 2021.

2 (Plaintiff's Exhibit No. 2021 was marked for
3 identification.)

4 BY MR. B. JACOBS:

5 Q. Just ask that you take a few minutes here
6 and -- and reflect back on this 1997 article. I'm
7 going to ask you a few questions about it.

8 (The witness reviews the document.)

9 THE WITNESS: Solder presses. I'm still
10 reading, sorry.

11 MR. B. JACOBS: That's okay. I was just
12 getting a number.

13 (The witness reviews the document.)

14 THE WITNESS: Okay.

15 BY MR. B. JACOBS:

16 Q. Why don't you start off by explaining what
17 document Exhibit No. 2021 is.

18 A. So we had -- okay, document 2021 is a paper
19 that appears to have been published in 1997 by Sean Wu,
20 myself, Chao-pin Yeh, Winnie Leung and Karl Wyatt on
21 behalf of Motorola. And it is a paper that describes a
22 problem or it describes a possible solution to reduce a
23 potential failure mode in an IC package with a thin
24 capacitor in a leadframe.

25 There's a -- on Page 2 there is a schematic

**MOTOROLA**

Technical Developments

RELIABLE LEADFRAME DESIGN FOR CONTACTLESS SMART CARD AND PLASTIC PACKAGING

by Sean X. Wu, Jean-Marc Delbecq, Chao-pin Yeh, Winnie Leung and Karl Wyatt

1 INTRODUCTION AND BACKGROUND

The radio frequency (RF) personal identification (ID) card and contactless smart card markets have been enjoying a high growth rate in the recent years. One of the issues to develop superior, low cost manufacturing technologies and capabilities is manufacturing yield (quality). Of the yield issues, interconnect (i.e., solder joint, conductive adhesive, etc.) failure or poor card surface (pitting, voiding, warpage, bow, etc.) are the two major concerns observed in the card fabrication. In the existing ID/smart card lamination process developed by Indala, an IC, a chip capacitor, a chip resistor, two leadframes, and a coil are sandwiched between two polyvinyl chloride (PVC) layers (See Figure 1). During this lamination process, pressure forces exerted by the soft PVC flow, e.g. PVC tends to push the two leadframes apart (A and B in Figure 2), resulting in severe stresses in the solder joints. These process-induced stresses can easily cause the solder joint to crack.

2 FINITE ELEMENT ANALYSIS AND DISCUSSIONS

To resolve the yield problem, simulation and modeling tools are used to find the root cause(s) and possible solutions. A detailed, comprehensive 3-D finite element analysis has been performed for the existing Indala ID card design. The results of this analysis show that with the existing design, solder stresses can reach a level that causes solder material to fail. One obvious way to reduce the excessive solder stresses is to reduce lamination pressure. However, with a reduced pressure, the surface quality may suffer. In order to reduce solder

stress while preserving adequate manufacturability and surface quality, a modified design is proposed. As shown in Figure 3, an additional area (a "step" shape) is added to each leadframe between the capacitor and the IC package to strengthen the leadframe structure. At the same time, three holes are added on the lower portion of leadframe encapsulated by the molding compound, to enhance interface strength between the leadframe and molding compound.

With this new design, the solder joints should experience much lower stresses during the lamination process because of the following three reasons. First, the leadframes themselves have a much higher deformation resistance to the PVC flow (the dimensions were optimized to have the maximum strength). Second, there is much less space for PVC layers to flow between the capacitor and the molding compound, hence both the leadframe and the solder joints will be subjected to a smaller loading. Third, the three holes in the leadframe can enhance the bonding strength between the molding compound and the leadframe. In brief, the yield and reliability of the ID card can be improved significantly with the proposed invention.

3 CONCLUSIONS

Finite element method has been used to analyze the solder joint failure in the manufacturing process of ID cards. It was found that the previous design of leadframe can induce large stress in the structure which in turn causes failure. Based on the simulation results, a modified design was recommended to reduce the process-induced stresses.

EXHIBIT 2021 PLTF.
 WITNESS DELBECCO DEFT.
 CONSISTING OF 2 PAGES
 DATE 03/22/2006
 BEHMKKE REPORTING & VIDEO SERVICES



Technical Developments

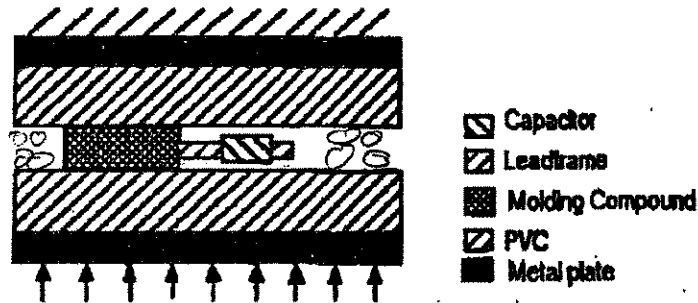


Fig. 1 Lamination process of the ID card

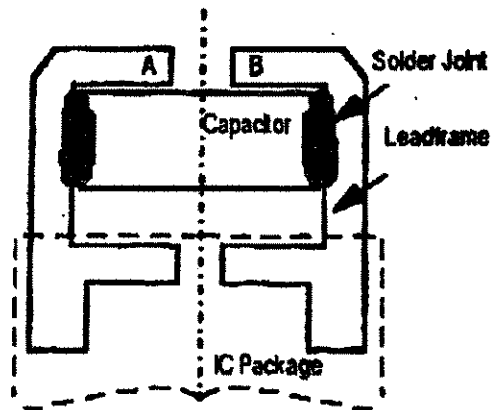


Fig. 2 Schematic drawing—the current leadframe design

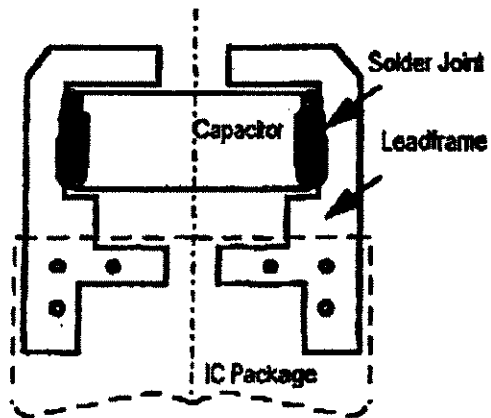


Fig. 3 Schematic drawing—the suggested leadframe design

EXHIBIT 18

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FOR THE SOUTHERN DISTRICT OF NEW YORK

LEIGHTON TECHNOLOGIES, LLC,)

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1 Q Why are you differentiating between you and
2 them? They were trying when you got there,
3 right?

4 A Because they were trying by mechanical
5 means by changing the plumbing prior to my going
6 there and trying to change the dwell times
7 electronically in their circuit boards, in the
8 controls. I had no control of that.

9 Q Right. But I didn't ask you how it was
10 being done, I just said you were trying to do
11 the same thing, you were trying to increase the
12 pressure during the cooling phase, weren't you,
13 generally?

14 A I could do no more than shut their
15 laminators. The pump took over the controls.

16 Q Okay. But you were trying to increase the
17 pressure during the cooling phase, weren't you,
18 at Motorola?

19 A All I was trying to do is come out with a
20 product with what I had to work with.

21 Q Okay. But you knew at the time when you
22 got there they said this laminator is backwards,
23 it's for circuit boards, right?

24 A Right.

25 Q It's got a much smaller ram on the cooling